

WHAT IS CLAIMED IS:

1. A wireless data transmitting and receiving system having a server device connected wirelessly to a plurality of client devices constituting a wireless network, the system transmitting and receiving data in packets on a time division basis between said server device and said plurality of client devices over said wireless network;

wherein each of said client devices comprises:
wireless communicating means for wirelessly transmitting and receiving data to and from said server device;

identification data storing means for storing device identification data unique to each of the wireless devices connected wirelessly to said wireless network;

packet evaluating means for evaluating the packets received by said wireless communicating means so as to extract from the received packets only those packets addressed to the own device based on said device identification data stored in said identification data storing means;

encryption key storing means for storing an encryption key shared only by the devices connected to said wireless network, said encryption key being used to

encrypt and decrypt the data communicated over said wireless network;

decrypting means for decrypting the encrypted data transmitted in the packets that were received and extracted, the decryption being done by use of said encryption key stored in said encryption key storing means;

reproducing means for reproducing the data decrypted by said decrypting means;

operating means for inputting a command requesting said server device to transmit the data to be reproduced by said reproducing means;

encrypting means for encrypting control data to be transmitted to said server device, the encryption being done by use of said encryption key stored in said encryption key storing means;

packet composing means for composing said control data encrypted by said encrypting means into packets each furnished with said device identification data stored in said identification data storing means and with receiving device identification data designating said server device as the device to receive said control data; and

controlling means which, based on said command for controlling said server device, controls said encrypting

means, said packet composing means and said wireless communicating means in such a manner causing said wireless communicating means to transmit the packets for controlling said server device by way of said wireless communicating means; and

wherein said server device comprises:

wireless communicating means for wirelessly transmitting and receiving data in packets to and from said client devices over said wireless network;

identification data storing means for storing first device identification data unique to each of the wireless devices connected wirelessly to said wireless network;

packet evaluating means for evaluating the packets received by said wireless communicating means so as to extract from the received packets only those packets addressed to the own device based on said device identification data stored in said identification data storing means;

identification data holding means for holding second device identification data for identifying the device that transmitted the extracted packets;

encryption key storing means for storing said encryption key shared only by the devices connected to said wireless network, said encryption key being used to

encrypt and decrypt the data communicated over said wireless network;

decrypting means for decrypting the encrypted control data transmitted in the packets that were received and extracted, the decryption being done by use of said encryption key stored in said encryption key storing means;

inputting means for inputting data destined for reproduction by said client devices;

compressing means for compressing the reproduction-destined input data;

encrypting means for encrypting the compressed reproduction-destined data based on said encryption key stored in said encryption key storing means;

packet composing means for composing the encrypted reproduction-destined data into packets each furnished with said device identification data stored in said identification data storing means and with device identification data designating the wireless device receiving said encrypted reproduction-destined data; and

controlling means which, based on the control data extracted by said packet evaluating means and decrypted by said decrypting means, causes said inputting means to input the reproduction-destined data as designated by

said control data; causes said encrypting means to encrypt the reproduction-destined input data by use of said encryption key stored in said encryption key storing means; causes said packet composing means to compose packets to be transmitted, each of the composed packets being constituted by the encrypted reproduction-destined data, by said second device identification data which are held in said identification data holding means and which identify the device having transmitted said control data, and by said first device identification data which are held in said identification data storing means and which identify the device transmitting said encrypted reproduction-destined data; and causes said wireless communicating means to transmit the composed packets over said wireless network.

2. A wireless data transmitting and receiving system according to claim 1, wherein said server device further comprises reproduction-destined data storing means for storing said reproduction-destined input data; and

wherein said controlling means of said server device causes said reproduction-destined input data to be stored into said reproduction-destined data storing means based on said control data from the client device in

question.

3. A wireless data transmitting and receiving system according to claim 2, wherein said server device transmits said reproduction-destined data stored in said reproduction-destined data storing means to the client device in question based on said control data from said client device.

4. A wireless data transmitting and receiving system according to claim 2, wherein said reproduction-destined data stored in said reproduction-destined data storing means are the data compressed by said compressing means.

5. A wireless data transmitting and receiving system according to claim 1, wherein said server device has a plurality of inputting means; and

wherein said controlling means of said server device causes said reproduction-destined data to be input through said inputting means in a standby state based on said control data from said plurality of client devices.

6. A wireless data transmitting and receiving system according to claim 1, wherein said server device further comprises:

schedule inputting means for inputting a schedule list regarding reproduction-destined data to be input in

future based on said control data from said client devices;

 preset table creating means for creating a preset table for presetting the reproduction-destined data to be input in future based on the input schedule list and on said control data from said client devices; and

 time counting means for counting time; and

 wherein said controlling means of said server device causes the preset reproduction-destined data to be input selectively through said inputting means based on said preset table and on the time counted by said time counting means.

7. A wireless data transmitting and receiving system according to claim 1, wherein the reproduction-destined data input through said inputting means of said server device include reproduction restriction information;

 wherein said controlling means of each of said client devices transmits to said server device user attributes input through said operating means of the client device in question; and

 wherein said controlling means of said server device determines whether or not to transmit the reproduction-destined input data to each of said client

devices based on said user attributes sent from said client devices and on said reproduction restriction information included in said reproduction-destined data.

8. A wireless data transmitting and receiving system according to claim 1, wherein one of the communicating devices outputs a reference signal that serves as a basis for counting time over said wireless network and the remaining communicating devices transmit signals based on said reference signal.

9. A server device connected wirelessly to a plurality of client devices constituting a wireless network, said server device transmitting and receiving data in packets to and from the wirelessly connected client devices on a time division basis over said wireless network, wherein each of said client devices transmits packets each constituted by control data used by the client device in question to request said server device to transmit data destined for reproduction and by unique identification data identifying the requesting client device, said requesting client device further selecting from the received packets those packets addressed to the device in question and extracting from the selected packets said data destined for reproduction, said server device comprising:

wireless communicating means for wirelessly transmitting and receiving data in packets to and from the wirelessly connected client devices over said wireless network;

identification data storing means for storing first device identification data unique to each of the wireless devices connected wirelessly to said wireless network;

packet evaluating means for evaluating the packets received by said wireless communicating means so as to extract from the received packets only those packets addressed to the own device based on said device identification data stored in said identification data storing means;

identification data holding means for holding second device identification data for identifying the device that transmitted the extracted packets;

encryption key storing means for storing an encryption key shared only by the devices connected to said wireless network, said encryption key being used to encrypt and decrypt the data communicated over said wireless network;

decrypting means for decrypting encrypted control data transmitted in the packets that were received and extracted, the decryption being done by use of said

encryption key stored in said encryption key storing means;

inputting means for inputting data destined for reproduction by said client devices;

compressing means for compressing the reproduction-destined input data;

encrypting means for encrypting the compressed reproduction-destined data based on said encryption key stored in said encryption key storing means;

packet composing means for composing the encrypted reproduction-destined data into packets each furnished with said device identification data stored in said identification data storing means and with device identification data designating the wireless device receiving said encrypted reproduction-destined data; and

controlling means which, based on the control data extracted by said packet evaluating means and decrypted by said decrypting means, causes said inputting means to input the reproduction-destined data as designated by said control data; causes said encrypting means to encrypt the reproduction-destined input data by use of said encryption key stored in said encryption key storing means; causes said packet composing means to compose packets to be transmitted, each of the composed packets

being constituted by the encrypted reproduction-destined data, by said second device identification data which are held in said identification data holding means and which identify the device having transmitted said control data, and by said first device identification data which are held in said identification data storing means and which identify the device transmitting said encrypted reproduction-destined data; and causes said wireless communicating means to transmit the composed packets over said wireless network.

10. A server device according to claim 9, further comprising reproduction-destined data storing means for storing said reproduction-destined input data;

wherein said controlling means causes said reproduction-destined input data to be stored into said reproduction-destined data storing means based on said control data from the client device in question.

11. A server device according to claim 10, wherein said server device transmits said reproduction-destined data stored in said reproduction-destined data storing means to the client device in question based on said control data from said client device.

12. A server device according to claim 10, wherein said reproduction-destined data stored in said

reproduction-destined data storing means of said server device are the data compressed by said compressing means.

13. A server device according to claim 9, further comprising a plurality of inputting means;

wherein said controlling means causes said reproduction-destined data to be input through said inputting means in a standby state based on said control data from said plurality of client devices.

14. A server device according to claim 9, further comprising:

schedule inputting means for inputting a schedule list regarding reproduction-destined data to be input in future based on said control data from said client devices;

preset table creating means for creating a preset table for presetting the reproduction-destined data to be input in future based on the input schedule list and on said control data from said client devices; and

time counting means for counting time;

wherein said controlling means causes the preset reproduction-destined data to be input selectively through said inputting means based on said preset table and on the time counted by said time counting means.

15. A server device according to claim 9, wherein

the reproduction-destined data input through said inputting means of said server device include reproduction restriction information;

wherein each of said client devices transmits to said server device user attributes input through said operating means of the client device in question; and

wherein said controlling means of said server device determines whether or not to transmit the reproduction-destined input data to each of said client devices based on said user attributes sent from said client devices and on said reproduction restriction information included in said reproduction-destined data.

16. A server device controlling method for controlling a server device connected wirelessly to a plurality of client devices constituting a wireless network, said server device wirelessly transmitting and receiving data in packets to and from said client devices on a time division basis over said wireless network, wherein each of said client devices transmits packets each constituted by control data used by the client device in question to request said server device to transmit data destined for reproduction and by unique identification data identifying the requesting client device, said requesting client device further selecting

from the received packets those packets addressed to the device in question and extracting from the selected packets the reproduction-destined data, said server device controlling method comprising the steps of:

causing said server device to receive data in packets from the wirelessly connected client devices over said wireless network;

extracting from the received packets only those packets addressed to the own device based on first device identification data included in each packet and unique to each of the devices connected wirelessly to said wireless network;

separating from the extracted packets second device identification data for identifying the device that transmitted said extracted packets, the separated second device identification data being retained;

decrypting encrypted control data transmitted in the packets that were received and extracted, the decryption being done by use of an encryption key shared only by the devices connected to said wireless network upon encrypting and decrypting data communicated over said wireless network;

extracting data to be transmitted to said requesting client device out of reproduction-destined

input data based on the decrypted control data, the extracted data being input selectively; compressing the reproduction-destined data selectively input; encrypting the compressed reproduction-destined data based on said encryption key; composing packets each constituted by the encrypted reproduction-destined data, by said first device identification data, and by said second device identification data retained; and transmitting the packets thus composed over said wireless network.

17. A server device controlling method according to claim 16, wherein said server device further comprises reproduction-destined data storing means for storing said reproduction-destined input data; said server device controlling means further comprising the step of causing said reproduction-destined input data to be stored into said reproduction-destined data storing means based on said control data from the client device in question.

18. A server device controlling method according to claim 17, further comprising the step of causing said server device to transmit said reproduction-destined data

stored in said reproduction-destined data storing means to the client device in question based on said control data from said client device.

19. A server device controlling method according to claim 16, further comprising the steps of:

acquiring a schedule list regarding reproduction-destined data to be input in future based on said control data from said client devices;

creating a preset table for presetting the reproduction-destined data to be input in future based on the acquired schedule list and on said control data from said client devices; and

selectively inputting in a suitably timed manner the preset reproduction-destined data based on said preset table.

20. A server device controlling method according to claim 16, wherein the reproduction-destined input data include reproduction restriction information;

said server device controlling method further comprising the steps of:

allowing each of said client devices to transmit to said server device user attributes input through operating means of the client device in question; and

causing said server device to determine whether or

not to transmit said reproduction-destined input data to each of said client devices based on said user attributes sent from said client devices and on said reproduction restriction information included in said reproduction-destined data.